

Lab Assignment & Solution



Cybersecurity Professional Program
Introduction to Python
for Security

Loops

PY-03-LS2

Loops in Nested Lists

Note: Solutions for the instructor are shown inside the green box.



Lab Objective

Understand how to work with nested lists and *for* loops together with the range function.



Lab Mission

Create nested lists and loops.



Lab Duration

15–25 minutes



Requirements

- Basic knowledge of loops.
- Working knowledge of data structures.



Resources

- Environment & Tools
 - Windows, Linux, MacOS
 - Python 3
 - PyCharm



Textbook References

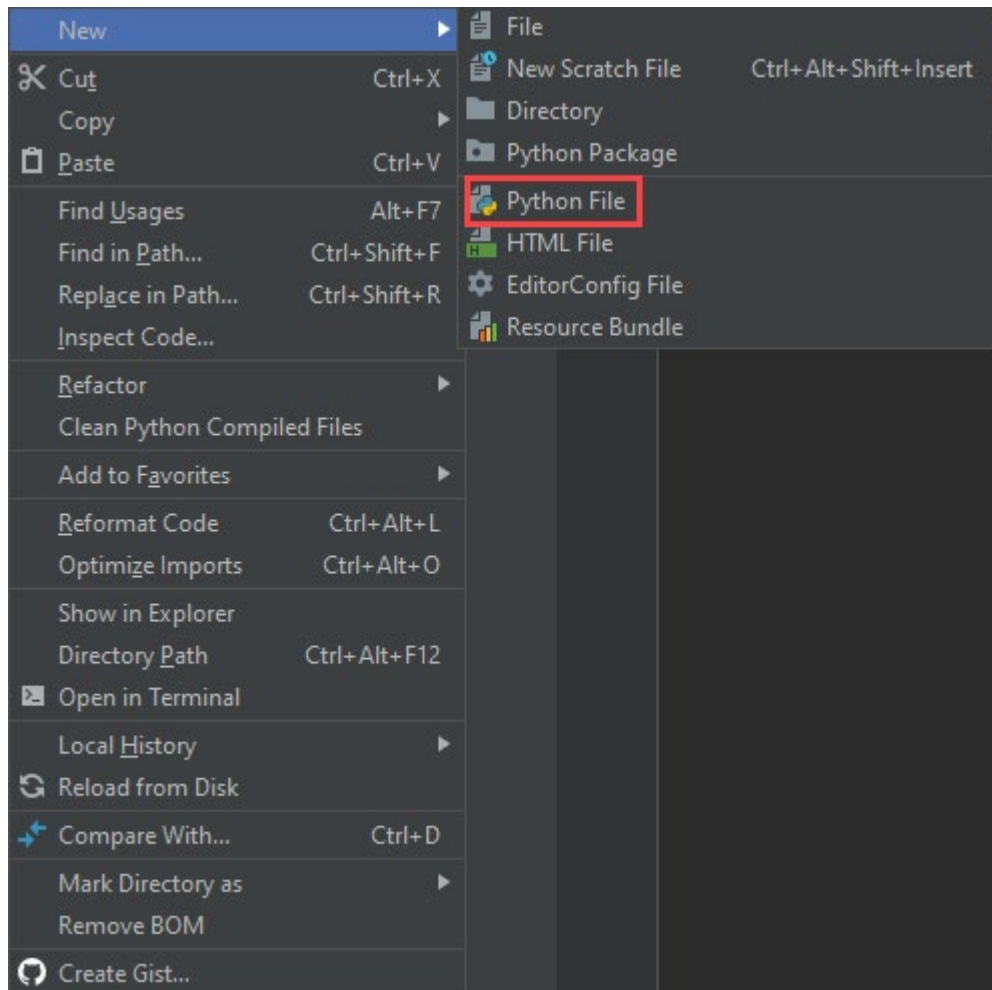
- Chapter 3: Loops
 - Section 1: For & While

Lab Task 1: Nested List

Create a *for* loop in a *for* loop (a nested loop).

- 1 Create a new Python file in PyCharm.

Right-click the project you created previously, and select **New** → **Python File**.



- 2 Create an empty list called “classroom”.

```
classroom = []
```

- 3 Create a **for** loop using the **range** function to iterate the loop 7 times.

```
classroom = []  
  
for i in range(7):
```

- 4 Each iteration should append a new empty list to the classroom list seven times.
Each nested list will represent a separate classroom.

Note: Doing this means you will be appending an empty list as an item of the classroom list.

```
classroom = []  
  
for i in range(7):  
    classroom.append([])
```

- 5 Create a new **for** loop in the first loop that will iterate from 1 to 10.

```
classroom = []  
  
for i in range(7):  
    classroom.append([])  
    for students in range(1,11):
```

- 6 In the second loop, populate the nested lists with the iterated range 1-11.
Outside the loops, print the end result of the populated list.

```
classroom = []  
  
for i in range(7):  
    classroom.append([])  
    for students in range(1,11):  
        classroom[i].append(students)  
  
print(classroom)
```